

Project Title	Funding	Strategic Plan Objective	Institution
Functional Genomics of Human Brain Development	\$1,313,408	Q2.Other	Yale University
Dysregulation of Protein Synthesis in Fragile X Syndrome and Other Developmental Disorders	\$1,221,847	Q2.S.D	National Institutes of Health
Regulation of Neuroligins and Effects on Synapse Number and Function	\$995,177	Q2.Other	National Institutes of Health
Single-cell approaches to deconvolution of disease-associated signals	\$817,969	Q2.Other	University of California, San Diego
The Elongation Hypothesis of Autism	\$760,000	Q2.Other	University of North Carolina
MRI Biomarkers of Patients with Tuberous Sclerosis Complex and Autism	\$727,821	Q2.S.D	CHILDREN'S HOSPITAL CORPORATION
FUNCTION OF NEUREXINS	\$716,276	Q2.Other	STANFORD UNIVERSITY
Induced neuronal cells: A novel tool to study neuropsychiatric diseases	\$680,862	Q2.Other	STANFORD UNIVERSITY
Function and Structure Adaptations in Forebrain Development	\$678,394	Q2.Other	CHILDREN'S HOSPITAL OF LOS ANGELES
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	\$639,375	Q2.S.G	SLOAN-KETTERING INST CAN RESEARCH
Neurotrophic Factor Regulation of Gene Expression	\$618,134	Q2.S.D	Harvard University
Impact of SynGAP1 Mutations on Synapse Maturation and Cognitive Development	\$614,568	Q2.Other	The Scripps Research Institute
Dynamic regulation of Shank3 and ASD	\$612,287	Q2.Other	Johns Hopkins University
Tet-mediated Epigenetic Modulation in Autism	\$603,129	Q2.S.D	Emory University
Neuronal Activity-Dependent Regulation of MeCP2	\$600,383	Q2.S.D	Harvard University
A Family-Genetic Study of Autism and Fragile X Syndrome	\$597,808	Q2.S.D	Northwestern University
Mechanotransduction C. elegans	\$588,908	Q2.Other	Massachusetts General Hospital
Dissecting recurrent microdeletion syndromes using dual-guide genome editing	\$580,798	Q2.Other	Massachusetts General Hospital
Synaptic pathophysiology of the 16p11.2 microdeletion mouse model	\$557,176	Q2.Other	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Reproducible protocols for robust cortical neuron and astroglial differentiation	\$500,132	Q2.Other	University of California, San Diego
Gaining insight into psychiatric disease by engineering piece by piece the human brain in vitro.	\$496,813	Q2.Other	STANFORD UNIVERSITY
Dissecting neural mechanisms integrating multiple inputs in C. elegans	\$485,000	Q2.Other	SALK INSTITUTE FOR BIOLOGICAL STUDIES
High content assays for cellular and synaptic phenotypes	\$462,191	Q2.Other	University of California, San Diego
BDNF and the Restoration of Synaptic Plasticity in Fragile X and Autism	\$455,630	Q2.S.D	University of California, Irvine
Heparan sulfate in neurophysiology and neurological disorders	\$449,744	Q2.Other	SANFORD-BURNHAM MEDICAL RESEARCH INSTIT

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Analysis of Shank3 Complete and Temporal and Spatial Specific Knockout Mice	\$425,202	Q2.Other	Duke University
Neuronal Adaptation and Plasticity after Chronic Disuse	\$423,750	Q2.Other	New York University
Biology of Non-Coding RNAs Associated with Psychiatric Disorders	\$416,433	Q2.Other	University of Southern California
Mechanisms of mGluR5 function and dysfunction in mouse autism models	\$410,720	Q2.S.D	UT SOUTHWESTERN MEDICAL CENTER
Autism-linked endosomal mechanisms in neuronal arborization and connectivity	\$406,250	Q2.Other	BROWN UNIVERSITY
The Impact of Pten Signaling on Neuronal Form and Function	\$405,000	Q2.Other	DARTMOUTH COLLEGE
The role of Foxp1-regulated signaling pathways in brain development and behavior	\$403,750	Q2.S.G	UT SOUTHWESTERN MEDICAL CENTER
Shank3 in Synaptic Function and Autism	\$401,250	Q2.Other	MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Investigating the Mechanism of Optic Nerve Hypoplasia Associated with CASK Mutation	\$398,230	Q2.Other	VIRGINIA POLYTECHNIC INST AND ST UNIV
New Models For Astrocyte Function in Genetic Mouse Models of Autism Spectrum Diso	\$396,250	Q2.S.D	CLEVELAND CLINIC LERNER COM-CWRU
Synaptic Phenotype, Development, and Plasticity in the Fragile X Mouse	\$395,642	Q2.S.D	MICHIGAN STATE UNIVERSITY
Sex-specific regulation of social play	\$391,250	Q2.S.B	BOSTON COLLEGE
Molecular mechanisms of the synaptic organizer alpha-neurexin	\$388,750	Q2.Other	UNIVERSITY OF TEXAS MEDICAL BR GALVESTON
Role of MEF2 and neural activity in cortical synaptic weakening and elimination	\$388,354	Q2.S.D	UT SOUTHWESTERN MEDICAL CENTER
PHENOTYPING ASTROCYTES IN HUMAN NEURODEVELOPMENTAL DISORDERS	\$386,607	Q2.Other	STANFORD UNIVERSITY
Optogenetic treatment of social behavior in autism	\$385,000	Q2.Other	University of California, Los Angeles
Genetic and Developmental Analyses of Fragile X Mental Retardation Protein	\$383,322	Q2.S.D	Vanderbilt University
Monoallelic expression in neurons derived from induced pluripotent stem cells	\$382,268	Q2.Other	ALBERT EINSTEIN COLLEGE OF MEDICINE
Translation, Synchrony, and Cognition	\$380,953	Q2.S.D	New York University
Neurobiological Mechanism of 15q11-13 Duplication Autism Spectrum Disorder	\$380,625	Q2.S.D	BETH ISRAEL DEACONESS MEDICAL CENTER
Development and afferent regulation of auditory neurons	\$376,200	Q2.S.D	Florida State University
Engrailed targets and the control of synaptic circuits in Drosophila	\$375,000	Q2.Other	UNIVERSITY OF PUERTO RICO MED SCIENCES
Translational Regulation of Adult Neural Stem Cells	\$372,633	Q2.S.D	University of Wisconsin
THE ROLE OF MECP2 IN RETT SYNDROME	\$356,699	Q2.S.D	University of California, Davis

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ELUCIDATING THE FUNCTION OF CLASS 4 SEMAPHORINS IN GABAERGIC SYNAPSE FORMATION.	\$353,931	Q2.Other	BRANDEIS UNIVERSITY
Functional analysis of Neuroligin-Neurexin interactions in synaptic transmission	\$336,875	Q2.Other	University of Massachusetts, Worcester
Spastic paraplegia, neurodegeneration and autism: possible role for AT-1/SLC33A1?	\$330,978	Q2.Other	University of Wisconsin
Inhibitory mechanisms for sensory map plasticity in cerebral cortex.	\$326,282	Q2.Other	University of California, Berkeley
Molecular Dissection of Calmodulin Domain Functions	\$321,473	Q2.Other	UNIVERSITY OF IOWA
Role of UBE3A in the Central Nervous System	\$321,269	Q2.S.D	University of North Carolina
Caspr2 as an autism candidate gene: a proteomic approach to function & structure.	\$318,000	Q2.Other	RBHS-ROBERT WOOD JOHNSON MEDICAL SCHOOL
Functional Genomics of Human Brain Development	\$317,764	Q2.Other	Yale University
Dysregulation of mTOR Signaling in Fragile X Syndrome	\$250,167	Q2.S.D	ALBERT EINSTEIN COLLEGE OF MEDICINE
Translational dysregulation in autism pathogenesis and therapy	\$250,000	Q2.S.D	Massachusetts General Hospital
Presynaptic Fragile X Proteins	\$249,000	Q2.S.D	DREXEL UNIVERSITY
Protein Interaction Network Analysis to Test the Synaptic Hypothesis of Autism	\$249,000	Q2.Other	SEATTLE CHILDREN'S HOSPITAL
Novel candidate mechanisms of fragile X syndrome	\$248,235	Q2.S.D	UNIVERSITY OF MICHIGAN
Deficits in KCC2 activity and the pathophysiology of Autism spectrum disorders	\$247,500	Q2.Other	Tufts University
Interneuron subtype-specific malfunction in autism spectrum disorders	\$240,000	Q2.Other	New York University
Variation in Neuroligin Concentration and Presynaptic Functional Development	\$237,438	Q2.Other	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
Chloride homeostasis and GABA maturation in fragile X syndrome	\$231,750	Q2.S.D	Northwestern University
Reducing Diversity at the Gamma Protocadherin Locus by CRISPR Targeting	\$230,739	Q2.Other	JACKSON LABORATORY
Coordinate actions between methyl-CpG binding proteins in neuronal development	\$226,585	Q2.S.D	University of Wisconsin
UBR7 is a novel chromatin directed E3 ubiquitin ligase	\$225,956	Q2.Other	Northwestern University
Role of a novel PRC1 complex in neurodevelopment and ASD neurobiology	\$225,000	Q2.Other	New York University
Molecular control of prefrontal cortical circuitry in autism	\$211,875	Q2.Other	ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI
Astrocytes contribution to tuberous sclerosis pathology	\$208,125	Q2.S.D	Yale University
Mechanisms of Autonomic Brainstem Development	\$202,500	Q2.Other	CHILDREN'S HOSPITAL OF LOS ANGELES

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Identification of human-relevant CLOCK molecular signaling pathways	\$201,875	Q2.S.E	UT SOUTHWESTERN MEDICAL CENTER
Role of autism-associated chromatin remodeler Brg1 in neuronal development	\$198,750	Q2.Other	UT SOUTHWESTERN MEDICAL CENTER
Imaging of protein synthesis and ubiquitination in fragile x syndrome	\$195,000	Q2.S.D	Emory University
Identification of TSC cellular phenotypes using patient-derived iPSCs	\$193,750	Q2.S.D	Rutgers University
Protein network of high risk copy number variants for psychiatric disorders	\$193,750	Q2.Other	University of California, San Diego
Decoding the RGS14 Interactome/Signalosome in CA2 hippocampal neurons	\$191,640	Q2.Other	Emory University
Mechanisms underlying the Cerebellar Contribution to Autism in Mouse Models of Tuberous Sclerosis Complex	\$190,458	Q2.S.D	UT SOUTHWESTERN MEDICAL CENTER
A mouse model for AUTS2-linked neurodevelopmental disorders	\$189,187	Q2.S.D	University of Illinois
mTOR modulation of myelination	\$179,659	Q2.S.D	Vanderbilt University
Dysregulation of mTOR Signaling in Fragile X Syndrome	\$164,833	Q2.S.D	ALBERT EINSTEIN COLLEGE OF MEDICINE
Targeting the PI3K Enhancer PIKE to Reverse FXS-associated Phenotypes	\$160,000	Q2.S.D	Emory University
Tools for manipulating local protein synthesis in the brain	\$148,500	Q2.Other	UNIVERSITY OF TORONTO
Endocannabinoids in social and repetitive behavioral domains	\$143,751	Q2.L.B	Vanderbilt University
Sexually dimorphic gene-expression and regulation to evaluate ASD sex bias	\$125,000	Q2.S.B	University of California, San Francisco
Multigenic basis for autism linked to 22q13 chromosomal region	\$125,000	Q2.S.D	Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY
RNA dysregulation in autism	\$125,000	Q2.Other	ROCKEFELLER UNIVERSITY
Probing synaptic receptor composition in mouse models of autism	\$124,998	Q2.S.D	Boston Children's Hospital
Fragile X syndrome target analysis and its contribution to autism	\$124,725	Q2.S.D	Vanderbilt University
Role of Autism Susceptibility Gene, TAOK2 kinase, and its novel substrates in Synaptogenesis	\$120,904	Q2.Other	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
Project 4: Calcium Signaling Defects in Autism (Pessah/Lein)	\$107,518	Q2.Other	University of California, Davis
MAGEL2, a candidate gene for autism and Prader-Willi syndrome	\$105,977	Q2.S.D	University of Alberta
Modeling multiple heterozygous genetic lesions in autism using Drosophila melanogaster	\$101,373	Q2.Other	University of California, Los Angeles

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Alternative splicing-mediated mechanisms of cortical interneuron maturation and circuit integration	\$98,061	Q2.Other	New York University
Mechanisms and Rescue of Neural Circuit Dysfunction in Mecp2 Mutant Mice	\$92,578	Q2.S.D	Baylor College of Medicine
Protein Interaction Network Analysis to Test the Synaptic Hypothesis of Autism	\$90,000	Q2.Other	MAYO CLINIC ROCHESTER
Neurobiology of Rai1, a critical gene for syndromic ASDs	\$87,500	Q2.S.D	The Board of Trustees of the Leland Stanford Junior University (Stanford)
Striatal Specific Alterations in Translation, Synaptic Function, and Behavior in	\$81,581	Q2.Other	New York University
FMRP regulates the pruning of cell-to-cell connections in the neocortex	\$79,500	Q2.S.D	UT SOUTHWESTERN MEDICAL CENTER
BDNF regulation of the cortical neuron transcriptome	\$76,792	Q2.Other	University of Colorado, Denver
Illuminating the role of glia in a zebrafish model of Rett syndrome	\$62,500	Q2.S.D	The Regents of the University of California, San Diego
Neuronal translation in Tsc2+/- and Fmr1-/y mutant ASD mouse models	\$62,500	Q2.S.D	The Trustees of Columbia University in the City of New York
CNTNAP2 regulates production, migration and organization of cortical neurons	\$62,500	Q2.Other	Memorial Sloan-Kettering Cancer Center
Pathogenic roles of paternal-age-associated mutations in autism	\$62,500	Q2.Other	Weill Cornell Medical College
Role of LIN28/let-7 axis in autism	\$62,500	Q2.Other	Johns Hopkins University
Functional analysis of EPHB2 mutations in autism	\$62,475	Q2.Other	McLean Hospital
Optogenetic treatment of social behavior in autism	\$60,236	Q2.Other	University of California, Los Angeles
Potassium channels as therapeutic targets in autism	\$60,000	Q2.S.D	Administrators of the Tulane Educational Fund
Rescuing synaptic and circuit deficits in an Angelman syndrome mouse model	\$60,000	Q2.S.D	Arizona Board of Regents, University of Arizona
Impact of Pten mutations: brain growth trajectory and scaling of cell types	\$60,000	Q2.Other	The Scripps Research Institute
Explore the pathogenic role of mTor signaling in chr16p11.2 microdeletion	\$60,000	Q2.Other	CHILDREN'S HOSPITAL OF LOS ANGELES
A Novel Glial Specific Isoform of Cdkl5: Implications for the Pathology of Autism in Rett Syndrome	\$60,000	Q2.S.D	University of Nebraska
Role of Neurexin in Synapse Formation and Maintenance	\$59,966	Q2.Other	STANFORD UNIVERSITY
BAZ1B Haploinsufficiency and the Neuro-phenotypes of Williams Syndrome	\$59,000	Q2.S.D	The Regents of the University of California, Santa Barbara
Analysis of MEF2 in Cortical Connectivity and Autism-Associated Behaviors	\$56,042	Q2.S.D	McLean Hospital
Investigating role of neurexin-1 mutation in autism using human induced neurons	\$56,042	Q2.Other	STANFORD UNIVERSITY

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Dissecting the 16p11.2 CNV endophenotype in induced pluripotent stem cells	\$54,400	Q2.S.D	University of California, San Francisco
Identification of genetic pathways that regulate neuronal circuits in <i>C. elegans</i>	\$54,194	Q2.Other	University of California, San Diego
A Novel GABA Signalling Pathway in the CNS	\$50,000	Q2.Other	McLean Hospital
Understanding the Role of Epac2 in Cognitive Function	\$48,120	Q2.Other	Northwestern University
The PI3K Catalytic Subunit p110delta as Biomarker and Therapeutic Target in Autism and Schizophrenia	\$45,000	Q2.Other	Cincinnati Children's Hospital
Timed mRNA translation events in neocortical development and neurodevelopmental disorders	\$39,720	Q2.Other	RBHS-ROBERT WOOD JOHNSON MEDICAL SCHOOL
A Novel Essential Gene for Human Cognitive Function	\$35,474	Q2.S.D	Harvard University
Monoallelic expression in neurons derived from induced pluripotent stem cells	\$35,232	Q2.Other	ALBERT EINSTEIN COLLEGE OF MEDICINE
Calcium Channels as a Core Mechanism in the Neurobiology of ASD	\$35,000	Q2.S.D	Massachusetts General Hospital
Cortactin and Spine Dysfunction in Fragile X	\$33,763	Q2.S.D	University of California, Irvine
Disruption of Reelin biosynthesis by de novo missense mutations found in aut	\$33,503	Q2.Other	UPSTATE MEDICAL UNIVERSITY
Dysregulated Translation and Synaptic Dysfunction in Medium Spiny Neurons of Autism Model Mice	\$33,333	Q2.Other	New York University
Mouse Model of Dup15q Syndrome	\$32,635	Q2.S.D	Texas AgriLife Research
Motor cortex plasticity in MeCP2 duplication syndrome	\$30,000	Q2.S.D	Baylor College of Medicine
Modeling Microglial Involvement in Autism Spectrum Disorders, with Human Neuro-glial Co-cultures	\$30,000	Q2.S.D	Whitehead Institute for Biomedical Research
Signaling Pathways that Regulate Excitatory-inhibitory Balance	\$30,000	Q2.Other	University of California, San Diego
Dissecting Reciprocal CNVs Associated With Autism	\$30,000	Q2.Other	Duke University
A Role for Cytoplasmic Rbfox1/A2BP1 in Autism	\$30,000	Q2.Other	University of California, Los Angeles
Perturbation of Excitatory Synapse Formation in Autism Spectrum Disorders	\$30,000	Q2.Other	Max Planck Florida Institute for Neuroscience
Investigating the Role of RBFOX1 in Autism Etiology	\$30,000	Q2.Other	University of Miami
Interrogating Synaptic Transmission in Human Neurons	\$30,000	Q2.Other	Stanford University
Corticogenesis and Autism Spectrum Disorders: New Hypotheses on Transcriptional Regulation of Embryonic Neurogenesis by FGFs from In Vivo Studies and RNA-sequencing Analysis of Mouse Brain	\$29,993	Q2.Other	Yale University
Identification and validation of genetic variants which cause the Autism Macrocephaly subphenotype	\$29,500	Q2.S.G	University of California, Los Angeles
Autism Linked LRRTM4-Heparan Sulphate Proteoglycan Complex Functions in Synapse Development	\$29,479	Q2.S.G	University of British Columbia

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FMRP and Pumilio co-regulate synaptogenesis by controlling Neuroglian expression	\$27,480	Q2.S.D	Vanderbilt University
Genetics Behind Brain Connectivity in ASD	\$25,000	Q2.S.G	University of Texas Southwestern Medical Center
Brain Somatic Mosaicism at ASD-Associated Loci	\$25,000	Q2.Other	University of Michigan
The Interplay Between Human Astrocytes and Neurons in Psychiatric Disorders	\$25,000	Q2.Other	University of California, San Diego
PPAR/SIRT1 PATHWAY IN C. ELEGANS	\$22,740	Q2.S.D	Children's Hospital of Philadelphia
a-Actinin Regulates Postsynaptic AMPAR Targeting by Anchoring PSD-95	\$15,000	Q2.Other	University of California, Davis
TSC/mTOR Signaling in Adult Hippocampal Neurogenesis: Impact on Treatment and Behavioral Models of Autism Spectrum Disorders in Mice	\$7,769	Q2.Other	University of California, Los Angeles
TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome	\$5,867	Q2.S.D	Case Western Reserve University
Mitochondrial Dysfunction and Autism Spectrum Disorders-Inflammatory Subtype	\$56	Q2.S.A	University of Arkansas
Regulation of cortical circuits by tsc1 in GABAergic interneurons	\$0	Q2.S.B	Yale University
Dysregulation of Mdm2-mediated p53 ubiquitination in autism mouse models	\$0	Q2.S.D	University of Illinois at Chicago
The Role of Glia in Fragile X Syndrome	\$0	Q2.S.D	Johns Hopkins University
Beta-catenin signaling in autism spectrum disorders	\$0	Q2.S.G	University of Illinois at Chicago
Role of GABA interneurons in a genetic model of autism	\$0	Q2.S.D	Yale University
Mechanisms of synapse elimination by autism-linked genes	\$0	Q2.S.D	University of Texas Southwestern Medical Center
Dendritic 'translatome' in fragile X syndrome and autism	\$0	Q2.S.D	University of Michigan
A functional genomic analysis of the cerebral cortex	\$0	Q2.Other	University of California, Los Angeles
Functional analysis of EPHB2 mutations in autism - Project 1	\$0	Q2.Other	Yale University
Probing the Molecular Mechanisms Underlying Autism: Examination of Dysregulated Protein Synthesis	\$0	Q2.S.D	National Institutes of Health
A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis	\$0	Q2.S.D	Boston Children's Hospital
Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture	\$0	Q2.S.D	King's College London
Undergraduate Research Award	\$0	Q2.S.G	Rutgers University
Undergraduate Research Award	\$0	Q2.S.G	Harvard University
Abnormalities in signal transduction in autism	\$0	Q2.S.A	New York State Institute for Basic Research in Developmental Disabilities

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Neural Correlates of the Y Chromosome in Autism: XYY Syndrome as a Genetic Model	\$0	Q2.S.D	Nemours Children's Health System, Jacksonville
Neural Correlates of the Y Chromosome in Autism: XYY Syndrome as a Genetic Model	\$0	Q2.S.D	Children's Hospital of Philadelphia
Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism	\$0	Q2.Other	University of California, Irvine
The role of the new mTOR complex, mTORC2, in autism spectrum disorders	\$0	Q2.Other	Baylor College of Medicine
DISRUPTION OF TROPHIC INHIBITORY SIGNALING IN AUTISM SPECTRUM DISORDERS	\$0	Q2.Other	Northwestern University
Modeling Pitt-Hopkins Syndrome, an Autism Spectrum Disorder, in Transgenic Mice Harboring a Pathogenic Dominant Negative Mutation in TCF4	\$0	Q2.S.D	University of North Carolina

